

**Amendments to the Drawings:**

As requestion by the Examiner, the titles of informal Figures 11A and 11L have been changed to "Truncated Telomerase". The attached two sheets of drawings include changes to Figs. 11A and 11L. These sheets replace the original sheets for these figures. All changes have been marked-up in red on the annotated sheets.

In addition, all the changes proposed in previous Amendments and accepted by the Examiner have been incorporated into the drawings. In anticipation of the Examiner's acceptance of the changes made in this amendment, formal drawings are being submitted in a separate submission.

Attachment: Replacement Sheets Figs. 11A and 11L  
Annotated Sheets Showing Changes in Figs. 11A and 11 L

## REMARKS

Reconsideration of this Application is respectfully requested. Claims 1-71 are pending; claims 18, 19, 67, 69 and 70 are currently amended; claims 1-16 and – 66 are canceled without prejudice; no claim is original; claim 68 is previously presented; claim 71 is new. No new matter is added by the claim amendments. The Remarks below are directed to the rejections of the outstanding Office Action.

The Owner of the application thanks Examiners Prouty and Walicka for their continuing input regarding claim amendments. The amendments herein are in accordance with the discussed changes.

### Remarks to Objections

*1.1 Specification:* Submitted herewith is a substitute specification incorporating all the amendments to the original specification: the preliminary amendment of 11 February 2000, and amendments filed 13 May 2002 and 6 October 2003. In addition, Table 1 has been amended and the term “intron” or “exon” has been replaced with “alternative intron/exon” where appropriate. The claim set submitted with this Amendment have also been incorporated into the substitute specification. A marked-up copy and a clean copy are enclosed. Therefore, the Examiner is respectfully requested to remove the objection.

*1.2 Drawings:* The titles of Figs. 11A and 11L have been amended to recite “Truncated telomerase”. Marked-up and corrected sheets are submitted herewith.

*1.3 Claims:* The language of claim 67 (not claim 19 as indicated in the Office Action) has been amended to recite “at least 90% amino acid sequence identity”. With this amendment, the objection has been obviated.

### Remarks to Rejections

*Item 2.1:* Claim 70 is rejected under 35 U.S.C. §112, second paragraph, for indefiniteness.

*Remarks:* The Owner has amended claim 70 to recite a “protein encoded by an isolated nucleic acid molecule encoding a splice variant of a gene sequence capable of being spliced to encode a reference human telomerase of SEQ ID No: 2”. Thus,

claim 70 is clarified and we respectfully request that the rejection be withdrawn.

*Item 2.2:* Claim 16 is rejected under 35 U.S.C. §112, first paragraph, for lack of written description.

*Remarks:* While we disagree with the Examiner, but desire to advance prosecution, Claim 16 has been canceled without prejudice. We reserve the right to prosecute this claim in a continuation application.

*Item 2.3 Rejection:* The Examiner continues to reject claim 18 under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,166,178 (the '178 patent). In particular, claim 18 is alleged to be directed to a protein sequence found in SEQ ID NO: 225 of the cited art.

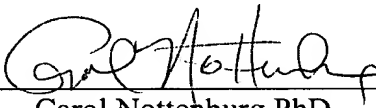
*Remarks:* While not acquiescing to the basis of the Examiner's rejection, but wishing to advance prosecution, claim 18 has been amended to exclude SEQ ID NO: 35. A new claim, claim 71, is directed to a protein consisting of SEQ ID NO: 35. Such a protein is not taught or suggested by the cited art. Therefore, we respectfully request the Examiner to remove this rejection.

### ***Conclusion***

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Respectfully submitted,

THE MONTICELLO GROUP LTD.

By   
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Attachments:

Substitute drawings (Figs 11A and 11L)  
Annotated Figs. 11A and 11L  
Marked-up substitute specification  
Clean substitute specification.

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407C2 amendment 3-2004.doc



~~N~~ terminal domain T truncated telomerase

ATGCCGCGCGCTCCCGCTGCCGAGCCGTGCGTCCCTGCTGCGCAGCCACTACCGGAGGTGCTGCCGCTGGCCACGTTTCGTG  
M P R A P R C R A V R S L L R S H Y R E V L P L A T F V

CGGCGCTGGGGCCCCAGGGCTGGCGGTGGTGACGCGGGGACCCGGCGCTTTCCGCGCGCTGGTGGCCAGTGCCTGGTGTGCGTGCCCTGGGACGACGGCCGCCCCCGCGC  
R R L G P Q G W R L V Q R G D P A A P R A L V A Q C L V C V P W D A R P P P A A

CCCTCCTTCGCGAGGTGTCTGCCTGAAGGAGCTGGTGGCCGAGTGTCTGAGAGGCTGTGCGAGCGCGGGCGGAAGACGTGCTGGCCTTCGGCTTCGCGCTGCTGGACGGGGCCG  
P S F R L V S C L K E L V A R V L Q R L C E R G A K N V L A F G F A L L D G A R

CGGGGGCCCCCGAGGCTTACCCAGCGTGCAGCTACCTGCCCAACACGGTGACCGACGCTGCGGGGAGCGGGGCTGGGGGCTGCTGCTGCGCGCGTGGCGACGACGT  
G G P P E A F T T S V R S Y L P N T V T D A L R G S G A W G L L L R R V G D D V

GCTGGTTACCTGCTGGCACGCTGCGCGCTCTTTGTGCTGGTGGCTCCAGTGCAGCTACCGAGTGTGCGGGCGCGCTGTACAGCTCGGCGCTGCCACTCAGGCCCGCCCCCGC  
L V H L L A R C A L F V L V A P S C A G G P P L Y Q L G A A T Q A R P P P

ACACGCTAGTGGACCCGAAGCGTCTGGATGCGAAGGGCTGGAACATAGCGTCAGGAGGCGGGTCCCCCTGGGCTGCGAGCCCCGGTGCAGGAGCGGGGGCAGTGC  
H A S G P R R R L G C E R A W N H S V R E A G V P L G L P A P G A R R R G G S A

CAGCGAAGTCTGCGTTCGCCAAGAGGCGCGGCTGGCGTGCCTGAGCGGAGCGGCGCGCTTGGGAGGGGTCTGGGCCCAACCGGGCAGGACGCGTGGACCGAGTGACCG  
S R S L P L P K R P R R G A A P E P E R T P V G Q G S W A H P G R T R G P S D R

TGGTTCTGTGTGGTGTCACTGCCAGACCCGCCGAAGAAGCCACTCTTTGGAGGGTGGCTCTCTGGCACGCGCACTCCACCCATCCGTGGGCGCGCAGCACCGCGGGCCCCC  
G F C V V S P A R P A E E A T S L E G A L S G T R H S H P S V G R Q H H A G P P

ATCCACATCGCGGCCACCACTCCCTGGGACACGCTTGTCCCCCGTGTACGCGGAGACCAAGCACTTCTCTACTCTCTCAGGCGACAAGGAGCAGCTGCGGCCCTCTCTCTACTCAG  
S T S R P P R P W D T P C P P V Y A E T K H F L Y S S G D K E Q L R P S F L L S

CTCTCTGAGGCCAGCCTGACTGGCGCTCGGAGGCTCGTGGAGACCATCTTTCTGGGTTCAGGCGCTGGATGCCAGGACTCCCCGAGGTTGCCCGCTGCCCCAGCGCTACTGGCA  
S L R P S L T G A R R L V E T I F L G S R P W M P G T P R R L P R L P Q R Y W Q

AATGCGGCCCCGTGTTCTGGAGCTGCTTGGGAACACGCGCAGTGCCTTACGGGGTGTCTCTAAGACGCACTGCGCGCTGCGAGCTGCGGTACCCCGACGAGCGGTGTCTGTGCCG  
M R P L F L E L L G N H A Q C P Y G V L L K T H C P L R A A V T P A A G V C A R

GGAGAAGCCCCAGGGCTCTGTGGCGGCCCCGAGGAGGAGACACAGACCCCGTGCCTGGTGCAGTGTCTCCGCCAGCACAGCAGCCCTGGCAGGTGTACGGCTTCGTGCGGGCTG  
E K P Q G S V A A P E E E D T D P R R L V Q L L R Q H S S P W Q V Y G F V R A C

CCTGCGCGGCTGGTCCCCCAGGCTCTGGGGCTCCAGGCACAACGAACGCGCTTCTCAGGAACCAAGAAGTTCACTCTCCCTGGGAAGCATGCCAAGCTCTCGTGCAGGAGCT  
L R R L V P P G L W G S R H N E R R F L R N T K K F I S L G K H A K L S L Q E L

GACGTGGAAGATGAGCGTGGGACTGCGCTTGGCTGCGCAGGAGCCAGGGTGTGGTGTGTTCCGGCCGAGAGCACCCTGCGGTGAGGAGATCTGGCCAAGTTCTGCACTGGCT  
T W K M S V R D C A W L R R S P G V G C V P A A E H R L R E E I L A K F L H W L

GATGAGTGTGTACGTGCTGAGCTGCTCAGGTCTTTCTTTATGTACGGAGACCAAGTTTCAAAGAAGAGGCTCTTTTCTACCGGAAGAGTGTCTGGAGCAAGTTGCAAAGCATTGG  
M S V Y V V E L L R S F F Y V T E T T F Q K N R L F F Y R K S V W S K L Q S I G

AAT - - NNN - - GACAGTACCAGGGGGTGTACCGCGGACTGGGCGTCCCAGGGTTGACTATAGGACCAGGTGCCAGGTGCCCTGCAAGTAGAGGGGCTCTCAGAGGCGTCTGGCTGG  
CATGGTGGACGTGGCCCCGGGATGGCTTCTGCGTGTGCTGCGTGGGTGCCCTGAGCCCTCACTGAGTCGGTGGGGCTTGTGGCTTCCCGTGGCTTCCCGTCTGCTGTGCTG

GCTGAGCAAGCCTCTGAGGGGCTCTCTATTG...

FIG. 11A



~~N-terminal domain~~ truncated telomerase (ver. 2)

ATGCCGCGCGCTCCCGCTGCCGAGCGGTGCGCTCCCTGCTGCGCAGCCACTACCGGAGGTGCTGCCGCTGGCCACGTTTCGTG  
M P R A P R C R A V R S L L R S H Y R E V L P L A T F V  
CGCGCGCTGGGGCCCCAGGGCTGGCGGCTGGTGACGCGCGGGAACCGGCGGCTTTCGCGCGCTGGTGCCAGTGCTGGTGCTGCCCTGGGACGACGCGCGCGCGCGCGCG  
R R L G P Q G W R L V Q R G D P A A F R A L V A Q C L V C V P W D A R P P P A A  
GGCCTCCCGGGGTCCGCGCTCCGGCTGGGGTTGAGGGCGGCGGGGGGAACAGCGACATGCGGAGAGCAGCGCAGGCGACTCAGGGCGCTTCCCGCGCAGGTG  
G L P G V G V R L G L R A A G G N Q R H A E S S A G D S G R F P R R  
A S P G S A S G W G \* G R P G G T S D M R R A A Q A T Q G A S P A G  
P P R G R R P A G V E G G R G E P A T C G E Q R R R R L R A L P P Q V  
CCCCCTCTTCCGCGCAGGTGCTCTGCTGAAGGAGCTGGTGCCCGAGTGCTGCGAGGCGTGTCGAGCGCGCGCGGAAGAACGTGCTGGCTTCGGCTTCGCGCTGCTGGACGGGCGCG  
P S F R Q V S C L K E L V A R V L Q R L C E R G A K N V L A F G F A L L D G A R  
CGGGGCGCGCGCGCGGCTTCCACACAGCGTGCGCAGCTACCTGCCCAACACGCTGACCGACGCACTGCGGGGAGCGGGCGTGGGGGCTGCTGCTGCGCGCGTGGGCGACGACGT  
G G P P E A F T T S V R S Y L P N T V T D A L R G S G A W G L L L R R V G D D V  
GCTGGTTCACCTGCTGGCAGCTGCGCGCTCTTTGTGCTGGTGGCTCCAGCTGCGCGCTACAGGTGTGCGGGCGCGCTGTACAGCTCGGCGCTGCCACTCAGGCGCGCGCGCGCGCG  
L V H L L A R C A L F V L V A P S C A Y Q V C G P P L Y Q L G A A T Q A R P P P  
ACACGCTAGTGAGCCCGAAGGCGCTGGGATGCGAACCGGCTGGAACCATAGCGTCAGGAGGCGCGGGTCCCGCTGGGCTGCCAGCCCGGGTGCGAGGAGCGCGGGGCGAGTGC  
H A S G P R R R L G C E R A W N H S V R E A G V P L G L P A P G A R R R V G G S A  
CAGCGGAAGTCTGCGCTGCGCAAGAGGCGCAGGCGTGGCGCTGCCCTGAGCGGAGCGGACGCGCTGGGCGAGGGTCTGGGCGCACCGGGGAGGACGCGTGAGCGAGTGACCG  
S R S L P L P K R P R R G A A P E P E R T P V G Q G S W A H P G R T R G P S D R  
TGGTTCTGCTGTGTGTCACTGCGCAGACCGCGGAAGAACCCACTCTTTGGAGGGTGGCTCTCTGCGACGCGCCACTCCACCCATCCTGCGGCGCGCAGCACACGCGGGCGCGCG  
G F C V V S P A R P A E E A T S L E G A L S G T R H S H P S V G R Q H H A G P P  
ATCCACATCGCGGCCACACGTCCTCGGACACGCTTGTCCCGGGTGTACGCGGAGACCAAGCACTTCTCTACTCTCAGGCGACAAGGAGCAGTGGCGCGCTCTCTACTACTCAG  
S T S R P P R P W D T P C P P V Y A E T K H F L Y S S G D K E Q L R P S F L L S  
CTCTCTGAGGCGCAGCGCTGACTGGCGCTCGGAGGCTCGTGAGACCATCTTTCTGGGTTCAGGCGCTGATGCCAGGGACTCCCGCAGGTGCGCGCTGCGCCAGCGCTACTGGCA  
S L R P S L T G T A R R L V E T I F L G S R P W M P G T P R R L P R L P Q R Y W Q  
AATGCGGCGCTGTTTCTGGAGCTGCTTGGGAACACGCGCAGTGCCCTACGCGGTGCTCTCAAGACGCACTGCGCGCTGCGAGCTGCGGTACCCAGCAGCGCGGTGCTGTGCGCG  
M R P L F L E L L G N H A Q C P Y G V L L K T H C P L R A A V T P A A G V C A R  
GGAGAAGCGCGCGCTGCTGGCGGCGCGGAGGAGGACACAGACCGCGCTGCGCTGGTGAGCTGCTCGCGCACACAGCAGCGCGCTGGCAGGTGTACGGCTTCTGTGCGGGCGCTG  
E K P Q G S V A A P E E E D T D P R R L V Q L L R Q H S S P W Q V Y G F V R A C  
CCTGCGCGGCTGCTGCGCGCGCGCTTGGGGCTCCAGGCAACAACGCGCTTCTCTCAGGAACCAAGAAGTTCACTCTCCTGGGAAGCATGCAAGCTCTGCTGCGAGGAGT  
L R R L V P P G L W G S R H N E R R F L R N T K K F I S L G K H A K L S L Q E L  
GACGTGGAAGATGAGCGTGCGGAGCTGCGCTTGGCTGCGCAGGAGCGCGGGTGGCTGTGTTCCGGCGCGAGACACGCTGCGTGAGGAGATCTGGCCAAGTTCTGCACTGGCT  
T W K M S V R D C A W L R R S P G V G C V P A A E H R L R E E I L A K F L H W L  
GATGAGTGTGTACGTCGTCGAGCTGCTCAGGTCTTTCTTTATGTACGAGACACGCTTTCAAAAGAACAGGCTCTTTTCTACCGGAAGAGTGTCTGGAGCAAGTTGCAAAGCATTGG  
M S V Y V V E L L R S F F Y V T E T T F Q K N R L F P Y R K S V W S K L Q S I G  
AAT--NNN--GACAGTCACAGGGGGGTGACCGCGGACTGGCGCTCCCGAGGTTGACTATAGGACAGGTGTCAGGTGCCCTGCAAGTAGAGGGGCTCTCAGAGGCGCTGGCTGG  
CATGGGTGGACGTGGCCCGGCATGGCCTTCTGCGTGTGCTGCGGTGGGCTCCCTGAGCCCTCACTAGTGGTGGGGCTTGTGGCTTCCCGTGAGCTTCCCGCTAGTCTGTGTCTG  
GCTGAGCAAGCCTCTGAGGGCTCTCTATTG--

FIG. 11L